

**Table S1.** Associations of severe disease with listed conditions in those aged less than 60

	Controls (4738)	Cases (475)	Univariate		Multivariable	
			Rate ratio (95% CI)	p-value	Rate ratio (95% CI)	p-value
Care home	4 (0%)	20 (4%)	65.0 (19.3, 218.8)	$2 \times 10^{-11}$	25.5 (6.9, 94.9)	$1 \times 10^{-6}$
Any prescription	3227 (68%)	418 (88%)	3.74 (2.79, 5.01)	$9 \times 10^{-19}$	2.12 (1.55, 2.90)	$3 \times 10^{-6}$
Any admission	1617 (34%)	275 (58%)	2.78 (2.28, 3.39)	$3 \times 10^{-24}$	1.49 (1.18, 1.88)	$7 \times 10^{-4}$
Type 1 diabetes	46 (1%)	14 (3%)	3.70 (2.01, 6.79)	$3 \times 10^{-5}$	1.84 (0.92, 3.69)	0.08
Type 2 diabetes	253 (5%)	77 (16%)	3.70 (2.80, 4.90)	$6 \times 10^{-20}$	2.59 (1.90, 3.53)	$2 \times 10^{-9}$
Other/unknown type	26 (1%)	18 (4%)	8.1 (4.4, 14.9)	$2 \times 10^{-11}$	6.9 (3.5, 13.7)	$4 \times 10^{-8}$
Ischaemic heart disease	128 (3%)	34 (7%)	2.88 (1.93, 4.29)	$2 \times 10^{-7}$	1.25 (0.79, 1.99)	0.3
Other heart disease	182 (4%)	73 (15%)	4.67 (3.47, 6.29)	$3 \times 10^{-24}$	1.74 (1.20, 2.52)	0.004
Asthma or chronic airway disease	616 (13%)	136 (29%)	2.73 (2.19, 3.40)	$3 \times 10^{-19}$	1.74 (1.36, 2.22)	$1 \times 10^{-5}$
Chronic kidney disease or transplant recipient	9 (0%)	16 (3%)	19.4 (8.3, 45.5)	$8 \times 10^{-12}$	5.9 (2.0, 16.9)	0.001
Neurological (except epilepsy) or dementia	64 (1%)	50 (11%)	8.7 (5.9, 12.8)	$1 \times 10^{-27}$	3.16 (1.99, 5.03)	$1 \times 10^{-6}$
Liver disease	21 (0%)	10 (2%)	4.76 (2.24, 10.11)	$5 \times 10^{-5}$	1.69 (0.72, 3.98)	0.2
Immune deficiency or suppression	20 (0%)	14 (3%)	7.2 (3.6, 14.4)	$2 \times 10^{-8}$	1.59 (0.59, 4.28)	0.4